



**US Army Corps
of Engineers** ®
San Francisco District



UPPER GUADALUPE RIVER FLOOD CONTROL PROJECT
DRAFT

ENVIRONMENTAL ASSESSMENT

U.S. Army Corps of Engineers and Santa Clara Valley Water District
December 2004

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1.0 INTRODUCTION

The U.S. Army Corps of Engineers, San Francisco District (Corps) and the Santa Clara Valley Water District (SCVWD) have proposed the construction of a flood control project along the upper reaches of the Guadalupe River in the city of San Jose, Santa Clara County, California.¹ The project includes channel modifications and maintenance along eight reaches of the Guadalupe River spanning approximately 6.4 miles. Modifications are also proposed on adjacent portions of two tributaries, Ross Creek and Canoas Creeks. Figure 1 shows the project area.

This Environmental Assessment (EA) serves two purposes. First, it supplements the Final Environmental Impact Report/Statement (FEIR/S) dated August 1998 (hereafter referred to as the Feasibility Study FEIR/S) for the Corps' Upper Guadalupe River Feasibility Study, prepared pursuant to the National Environmental Policy Act (NEPA). Second, it supplements the FEIR/S dated November 1999 prepared jointly by the SCVWD and the Corps Regulatory Branch (hereafter referred to as the Regulatory FEIR/S) to satisfy their responsibilities under NEPA, for the Corps regulatory permit issued to the SCVWD under Section 404 of the Clean Water Act. Updated compliance with the California Environmental Quality Act (CEQA) will be handled in a subsequent document to be issued by the SCVWD.

This supplementation under NEPA is needed because of several changes in the project and the affected environment, and to resolve differences between the 1998 Feasibility Study EIR/S for Corps construction of the majority of the project and the 1999 Regulatory EIR/S for Corps regulatory permitting of the entire project. This EA covers Corps construction of portions of the project. It also covers Corps permitting of the project and SCVWD construction of portions or all of the project.

2.0 HISTORY OF NEPA COMPLIANCE AND ASSOCIATED STUDIES

The Corps of Engineers and the SCVWD conducted detailed flood control studies for the upper reaches of the Guadalupe River starting in the early 1990s. These parallel studies had different objectives and used different criteria in formulating and evaluating alternatives. The Corps study included reaches 7 through 12 of the river, from the downstream Union Pacific Railroad bridge to Blossom Hill Road. The SCVWD study added reaches 6 and 13, extending the study from I-280 to the Alamos Drop Structure above Blossom Hill Road. These reaches and study areas are shown in Figure 1. The Corps study assumed that the SCVWD would construct flood control works in reach 6 to pass downstream floodwaters conveyed by a potential Corps project.

The purpose of the Corps feasibility study was to determine whether there was a national interest in constructing a flood control project along the upper Guadalupe River and which alternative would provide maximum economic benefits while being environmentally acceptable. This alternative is called the National Economic Development (NED) Plan.

¹ This project is separate from the Corps Guadalupe Flood Damage Reduction Project in downtown San Jose and the SCVWD's Lower Guadalupe River Flood Control Project extending downstream to Alviso.

The SCVWD pursued its own flood-control and environmental studies independently of and parallel with the Corps feasibility study, due to uncertainties about Federal funding and because the SCVWD planned additional flood-control work beyond the boundaries of the Corps feasibility study. The purpose of the SCVWD studies was to determine the optimum plan providing protection against the one percent (100-year) flood, given fiscal constraints and environmental considerations. As a result, these two studies and their respective environmental documents examined different sets of alternatives in response to different study objectives.

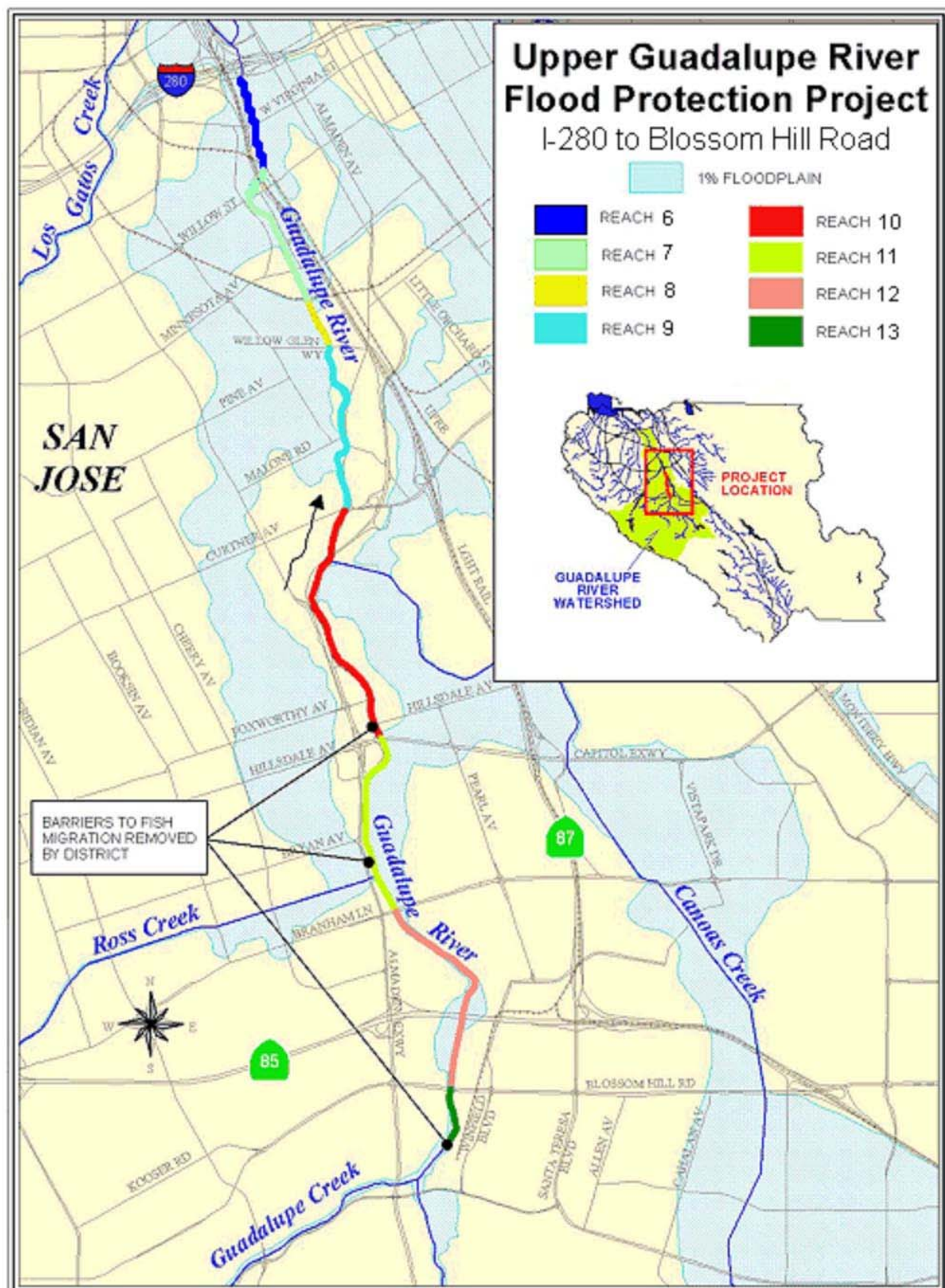
The Corps Feasibility Report and EIR/S analyzed plans providing protection against 20-, 50-, and 100-year flood events, with the 50- and 100-year plans receiving detailed analysis in the EIR/S. The feasibility study selected as the NED plan the alternative providing protection against a 50-year flood through selective widening of the river channel. The NED plan was named the Valley View Plan after the historic Valley View packing plant.

Since the SCVWD had selected a preferred alternative (described below) that would provide greater flood protection than the Corps' NED Plan, the Corps Feasibility Report and EIR/S proposed construction of the SCVWD alternative within the Corps study area. This Corps alternative is called the Locally-Preferred Plan or LPP. If the LPP were to be constructed, the Federal share of its cost would be limited to the Federal share of the cost of the NED plan. Costs for project elements not in the NED plan would be the responsibility of the SCVWD.

The SCVWD's Guadalupe River Watershed Planning Study Engineer's Report and EIR/S evaluated two alternatives in detail. These were a Preferred Project Alternative which would use a combination of bypass channels and channel widening to provide flood protection, and a Minimize Vegetative Impacts (MVI) Alternative which would substitute additional bypass channels for channel widening in some areas to minimize impacts on the existing riparian habitat. Since construction of the project by the SCVWD would require a permit under section 404 of the Clean Water Act, the SCVWD and the Corps Regulatory Branch prepared a combined EIR/S for this permit.

The MVI Alternative was determined to be the environmentally superior alternative under CEQA, based on the analyses of potential environmental impacts. However, this alternative would have significantly greater socioeconomic impacts due to demolition of 139 additional homes in the bypass channel alignment. This alternative was estimated to cost \$43 million more than the Preferred Project at that time. Therefore, the Preferred Project Alternative was selected in the EIR/S as the *least environmentally damaging practicable alternative* under the Section 404(b)(1) Guidelines and the preferred alternative under NEPA based on lower project costs and lower socioeconomic impacts.

The Record of Decision (ROD) for the feasibility report FEIR/S was signed June 1, 1999. The ROD for the Regulatory FEIR/S was signed on January 20, 2004. Congress authorized construction of the LPP for reaches 7-12 (hereafter called the Authorized Plan) in 1999. The preferred alternative for the entire project including reaches 6 and 13 will continue to be called the Preferred Project Alternative in this document.



3.0 PROJECT CHANGES AND SUBSEQUENT AGENCY COORDINATION

Since completion of the 1998 feasibility study and FEIR/S, several changes have occurred in the project description. The Valley View Plan has been reevaluated and modified for environmental compliance in order to re-examine cost sharing under the original cost-sharing prescription set forth by the 1998 feasibility study. Changes have been made in the Preferred Project Alternative. Additional permit conditions have been placed on the project. A limited reevaluation report² (LRR) describing these changes has been submitted for review to Corps Headquarters and the Department of the Army. The changes are summarized below.

The Corps feasibility study alternatives discussed below (including the Authorized Plan) do not include construction of reach 6 by the Corps. However, these alternatives would not be practicable without construction of this reach by the SCVWD or another party. Therefore, construction of reach 6 is a related project under NEPA regulations and its impacts are included in the evaluation of both Corps alternatives.

3.1 Changes in the Preferred Project and Associated Agency Coordination

Between the issuance of the 1998 Feasibility FEIR/S and the 1999 Regulatory FEIR/S some minor changes were made to the Preferred Project Alternative. These changes are described in the 1999 Regulatory FEIR/S (Volume V, section 14.5). For this reason and since the Corps will be constructing most of the project, the Corps hereby adopts and incorporates by reference the 1999 Regulatory FEIR/S for purposes of project construction, as supplemented herein. Cost-sharing for construction of this project will be based on the cost of the revised Valley View Plan described in Section 3.2.

Since the 1999 Regulatory FEIR/S was issued the following additional design changes have been made in the Preferred Project Alternative as design has progressed.

- The City of San Jose has already removed the Hillsdale Avenue Bridge, relocated associated utilities, and constructed a replacement bridge at Foxworthy Avenue. These elements are therefore dropped from the Preferred Project Alternative.
- Crib walls will be used instead of gabions in lower reach 9 (600 feet), reach 10C (2,100 feet), and reach 11A (300 feet). Gabions will still be used in the bypass channel in reaches 6 through 8. The gabions are being replaced with crib walls due to cost and geotechnical considerations.

² A limited reevaluation report is a study that provides an evaluation of a specific portion of a plan under current policies, criteria and guidelines, and may be limited to economics, environmental effects or, in rare cases, project formulation.

- The number of acres of proposed mitigation eligible for Federal cost sharing was recalculated. The acreages eligible are: riparian forest, 20.92 acres; shaded riverine aquatic (SRA) cover, 13,193 linear feet; and freshwater wetland, 0.9 acre.
- New riparian forest that the SCVWD has allowed to grow in Reach 12 under its stream maintenance program has provided improvements to water temperature and will be used as advance mitigation for project temperature impacts with the concurrence of the regulatory agencies. After mitigation plantings in this reach are complete, any net increase in postproject SRA cover and riparian forest acreage in this reach over that previously proposed in the final regulatory EIR/S will be applied to mitigation banking that can be used by other SCVWD projects in the future. Any habitat provided by a mitigation bank will not be cost-shared by the Federal government.
- The reach 12 spreader dams that the SCVWD proposed in the final regulatory EIR/S for instream percolation are not compatible with current mitigation plans for this reach or the current thermal modeling of project impacts. If these spreader dams were to be constructed, this would have impacts on fish and wildlife habitat and water temperatures. If the SCVWD pursues permits for these dams in the future, they will need to address and mitigate resulting impacts to the satisfaction of the permitting agencies including the Corps.
- The SCVWD has removed three fish barriers in reaches 10, 11, and 13 (Figure 1).

Accelerated Construction Schedule and Associated Coordination. The evaluation of the Authorized Plan in the Feasibility Study EIR/S was based on a construction schedule of three years. However, due to the known sensitivity of steelhead trout and Chinook salmon to increases in water temperature, the 1999 Regulatory EIR/S included an extensive thermal analysis to determine how project construction time would affect water temperatures in the river. This thermal analysis modeled the water temperature increases associated with construction schedules of 6 years³ and 25 years⁴. The conclusions from the thermal analysis (1999 Regulatory FEIR/S, Volume VI, section 4-14) are that simulated temperature increases associated with the 25-year construction schedule are expected to be relatively small and to cause less-than-significant effects on steelhead and chinook salmon within the project area. Simulated temperature increases modeled at that time under the 6-year schedule would be greater than those simulated for the 25-year construction schedule and could potentially cause temporary adverse impacts on juvenile steelhead because of higher water temperatures during the spring and summer.

At the time of the 1999 FEIR/S, formal consultation with the National Marine Fisheries Service (NMFS) under Section 7 of the Endangered Species Act was in progress. This consultation was concluded on April 18, 2000 with the issuance of a Biological Opinion (BO) by NMFS. Table 1 shows the “reasonable and prudent measures” required by the BO, including construction of the project over a 25-year period. The BO also included tentative essential fish habitat (EFH) recommendations under the Magnuson-Stevens Fishery Conservation and Management Act. The Corps agreed to these conservation recommendations in a letter dated January 12, 2001.

³ Accelerated construction schedule if Federal funds were available.

⁴ SCVWD construction schedule without Federal funds and considering local funding uncertainties at that time.

Additional thermal analyses were conducted in 2003 and 2004. These analyses used updated data on river temperatures and reflected the increase in SRA cover along the river in reaches 6 and 12 due to growth of vegetation in recent years. They also used revised tree growth rates based on the known growth rates of previous mitigation plantings elsewhere in the Santa Clara Valley. Analysis assumptions and results were coordinated with other agencies through the Guadalupe Watershed Integration Working Group⁵ (GWIWG) to ensure consensus. Results are discussed in Section 4.1.

The proposed 9-year construction schedule is shown in Table 2. Construction within the existing river channel must follow seasonal restrictions (June 1-October 15) established by the permitting agencies. The construction schedule used in thermal modeling covered 11 years, but with only 9 years elapsing from the time of the first mitigation plantings and shade impacts to the time of the last shade impacts. Construction along Ross and Canoas Creeks will not involve either shade losses or mitigation plantings so will not have thermal impacts.

The Biological Opinion issued by NMFS on April 18, 2000 required re-initiation of Section 7 consultation if the project were to be constructed in less than 25 years. In accordance with this requirement, in July 2004 the Corps requested re-initiation of formal consultation for the effects of the accelerated schedule on salmonids and requested formal concurrence that this schedule complies with the 2000 Biological Opinion, based on the updated thermal modeling. NMFS is in the process of preparing a Supplemental BO due to changes in the project since the 2000 BO. Based on coordination with NMFS, this document will approve the nine-year construction schedule for this project and will require NMFS review of detailed project designs as they are prepared.

Additional Studies - The San Francisco Regional Water Quality Control Board (RWQCB) issued a water quality certification under Section 401 of the Clean Water Act on December 3, 2003 for construction of the Preferred Project Alternative by the Corps and the SCVWD. This certification contains 41 provisions that must be fulfilled. Due to the large number of provisions, many of which are routine procedural requirements such as preparation of a storm water pollution prevention plan, only the more significant ones are listed below in Table 3. Included are a number of studies to determine if minor project modifications would be appropriate and to provide for better management of the Guadalupe River.

Condition 32 of the certification requires further studies to determine whether to modify the project design before construction to improve project benefits. These include: Sediment Supply and Transport Study, Longitudinal Profile and Cross-Sections Channel Survey Study, Riparian Planting Soil Suitability Study, Modification Design and Location Study, Gravel Augmentation Program Study, Temperature Impacts Study, and Bank Armoring Suitability Study.

⁵ The GWIWG, an interagency collaborative workgroup, began meeting in 2001 to discuss issues in the Guadalupe River watershed including flood control projects in the planning or construction phases. Participating agencies include the Corps, the SCVWD, the San Francisco Regional Water Quality Control Board (RWQCB), the Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service (FWS), National Marine Fisheries Service (NMFS), the California Department of Fish and Game (DFG), the Guadalupe-Coyote Resource Conservation District (GCRCD), and the City of San Jose (CSJ).

3.2 Changes in the Valley View Plan

Thermal analysis of a fluvial geomorphic restoration alternative (1999 Regulatory FEIR/S, Volume VI, section 3.2) showed severe impacts on water temperatures in reaches 6 through 8 due to removal of large numbers of trees shading the river. These findings raised concerns that the temporary removal of approximately half the shade in reaches 7 and 8 as proposed under the Valley View Plan could cause unacceptable impacts on water temperatures and thus salmonids.

Table 1: Reasonable and Prudent Measures, and Terms and Conditions, in the Biological Assessment

Reasonable and prudent measures	Associated Terms and Conditions
1. Avoid and minimize instream construction impacts to the Guadalupe River ecosystem	Isolate each workspace from flowing water
	Maintain a corridor for unimpeded passage of steelhead during construction
	Use existing points of ingress and egress, or work from top of bank, where practicable
	Limit in-stream construction to period of April 15-October 15, with limitations before June 1
	Removal and relocation of aquatic macrofauna
	Ensure that construction in Ross and Canoas Creeks does not contribute sediment or turbidity to the Guadalupe River
	Educate workers about the value of steelhead trout and their habitat
2. Minimize temporary and permanent changes to instream and riparian habitat and ensure mitigation success	Photo documentation prior to and after construction, and compilation of these photos into a reference library
	Fully mitigate riparian forest and SRA cover losses on a 1:1 basis
	Prepare a mitigation and monitoring plan for NMFS review and approval
	Implement a vegetation protection plan
	Mitigation areas will not be affected by construction and will be protected in perpetuity
	Adherence to proposed 25-year construction schedule
3. Monitor construction and relocate steelhead using a fisheries biologist	Retain fisheries biologist with appropriate expertise; biologist will monitor construction including temporary diversions
	Fisheries biologist will capture and relocate steelhead trout to avoid impacts from construction
	Monitor construction to avoid and rectify harmful conditions
	Immediate notification of NMFS in case of steelhead injury or mortality
4. Implement adequate measures to control sediment, turbidity, and pollutants resulting from construction	Use erosion control and sediment detention devices
	Prepare and implement a Storm Water Pollution Prevention Plan
	Prepare and implement a Toxic Material Control and Spill Response Plan
	Water from site shall be removed from the site or placed in a settling basin prior to it being returned to the river
	All materials used for construction shall be non-toxic
5. Prepare and submit annual monitoring reports	Provide written monitoring report within 30 days of completion of each construction season
	Provide written reports regarding mitigation activities on the schedule indicated in the Mitigation and Monitoring Plan

	Provide written reports on the results of the Vegetation Protection Plan on the schedule indicated in the plan
	Submit all reports and plans to the appropriate NMFS official

Table 2: 9-Year Construction Schedule

	Fiscal Year																																					
	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY 12				FY 13					
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
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Table 3: Major Water Quality Certification Requirements

Requirement	Implementation Period		
	<i>Design</i>	<i>Construction</i>	<i>Post-Construction</i>
Characterization of material to be excavated using standard protocols	x		
Sediment supply and transport study	x		
Riparian planting soil suitability study	x		
Project design modification study	x		
Gravel augmentation study	x		
Study temperature impacts from reaches upstream from the project	x		
Bank armoring study- feasibility of biotechnical erosion control	x		
Preparation and implementation of plans for impact avoidance and rectification, such as storm water pollution prevention plans	x	x	
Construction limited to June 1 to October 31 unless advance approval received		x	
Safe stockpiling of excavated material		x	
Proper disposal of excavated material		x	

Diversion of flows around construction sites		x	
Investigation and corrective measures if fish harmed by construction		x	
Profile and cross-section surveys to determine erosion and aggradation trends	x	x	x
Monitoring and reporting requirements		x	x
Revision of mitigation plan if mitigation does not meet criteria		x	x

Subsequently, informal consultation with NMFS on the Valley View Plan resulted in a determination by NMFS that this plan would need to be substantially modified to be acceptable. In a letter dated April 5, 2000, NMFS stated that neither the Authorized Project nor the Valley View Plan as it then existed would be acceptable to NMFS due to the accelerated construction schedule of three years recommended by the 1998 Feasibility Report. They further noted that the Valley View Plan was inherently unacceptable because the design would cause large impacts on low-bank riparian habitat and shaded riverine aquatic (SRA) cover. They also emphasized the extreme sensitivity of the river's Chinook salmon and steelhead trout to water temperature increases and habitat degradation. NMFS recommended that the Corps modify the Valley View Plan to parallel the design of the LPP, which had acceptable impacts.

Therefore, the Valley View Plan was revised to use bypass channels and widening as in the Preferred Project, but with less capacity. A bypass channel replaced channel widening in reach 7 and floodwalls in reach 8. Channel widening in upstream areas was revised to use the same bench height and channel side as in the LPP, with the exception of 900 feet of riverbank in reach 11C. Revised hydraulic modeling showed a need for channel widening along portions of reach 9, so widening was added in these areas. Table 4 lists the modifications to the Valley View Plan; the reach not shown (10B) was unchanged from the Feasibility Study EIR/S.

As a result of these design changes and the need for the project to receive Congressional reauthorization due to substantial increases in total project costs, the LRR was prepared for review by Corps Headquarters.

The final Coordination Act Report (CAR) prepared by the US Fish Wildlife Service (FWS) under the Fish and Wildlife Coordination Act (FWCA) assessed the impacts of the Authorized Plan. The Revised Valley View Plan and the Authorized Plan have very similar locations and types of riparian forest and SRA cover impacts, so the compensation ratios from the Authorized Plan were used to determine mitigation needs for the updated plans. At the request of the Corps, the FWS prepared a Planning Aid Report under the FWCA to address changes to the project since the CAR was issued.

3.3 Agency Coordination on a Floodplain Alternative

In February 2002, the GWIWG held the first of several meetings to identify design modifications that would improve ecological conditions of the Guadalupe River while avoiding any additional significant impacts to the Guadalupe River. Over the course of the following eighteen months, several proposals for modifications were discussed, including major modifications to the east bank where adjacent properties were being acquired for the bypass, and in-stream features to enhance habitat values in areas with eroding banks and bed incision. Among these proposals

were the excavation of a continuous floodplain bench in place of the proposed bypass channels in Reaches 6, 7, 8, parts of 9, and 11A, east and west bank biotechnical improvements, and grade control structures. Goals of these modifications included improving bank stability and reducing bed incision, increasing residence time of sediment and nutrients in the system, increasing channel and riparian habitat, utilizing available right-of-way as a more natural flood bench instead of an armored bypass channel, and decreasing required maintenance.

Table 4: Modifications to Valley View Plan

PLAN	LOCATION	FLOOD CONTROL METHOD	ASSOCIATED ENGINEERING STRUCTURES	BRIDGE PLAN
REACH 7				
Valley View (1998)	East bank	Widening and benching	Earthen embankment;	Replace Willow Street and Alma Street bridges
Valley View (2004)	East Bank	Bypass channel; bank lowering to create island berms, floodwall	Gabions in bypass channel; excavation for floodwall and bypass	Same
REACH 8				
Valley View (1998)	East and west banks	Floodwalls	Excavation	None
Valley View (2004)	East bank	Bypass channel	190-foot weir drop structure, gabions in bypass channel	None
REACH 9				
Valley View (1998)	None	None	None	Replace Willow Glen Way bridge
Valley View (2004)	East bank	Widening and benching, short bypass channel	Excavation and crib wall	Same
REACH 10A				
Valley View (1998)	East bank	Widening and benching	Excavation and crib wall along Almaden Road	None
Valley View (2004)	East bank	Same, except raise bench heights to 6-8 ft. from 3 ft.	Same	Same
REACH 10C				
Valley View (1998)	East bank alternating to west bank, then both banks	Widening and benching	Earthen embankments	Replace Hillsdale Avenue Bridge
Valley View (2004)	Moved entirely to east bank	Same, except raise bench heights to 6-8 ft. from 3 ft.	Same	None (already completed by City of San Jose)
REACH 11				

Valley View (1998)	East and west banks	Widening and benching.	Earthen embankments	None
Valley View (2004)	Some widening moved to west bank	Widening and benching	Same	None

To identify the feasibility of the continuous east bank floodplain bench, site visits were conducted, additional field data were collected, and hydraulic capacity remodeled under different bench heights. The resulting hydraulic modeling demonstrated that a continuous floodplain bench with a 10- or 15 foot cut below the existing ground surface would not convey a 100-year flood flow unless the width of riparian forest mitigation plantings were reduced to an inadequate level. The SCVWD determined that the floodplain bench would likely need to be armored due to water velocities. These limitations on the establishment of riparian forest and armoring the floodplain bench were considered to be unacceptable constraints of the continuous east bank floodplain bench by GWIWG.

To meet flood protection commitments to the residents of San Jose, begin implementation of early mitigation plantings, and secure federal funding for the Project, GWIWG agreed in 2003 that the Preferred Project Alternative as proposed should be recommended for approval, subject to certain further studies and potential design modifications before construction to enhance project benefits. This provision is now reflected in Condition 32 of the water quality certification (see section 6.1).

Finding 10 of the water quality certification requires an independent review panel (IRP) of geomorphologists to address the plan of further study. That panel has completed its report, which addresses several topics including recommended studies, the likely effects of the Preferred Project Alternative, possible modifications to this alternative, and the feasibility and requirements of a floodplain plan. On that basis, the GWIWG is now developing the study plan required by Condition 32 for implementation and potential design modifications before construction.

4.0 CHANGES IN THE AFFECTED ENVIRONMENT, IMPACTS, AND MITIGATION MEASURES

4.1 Preferred Project Alternative

Impacts under the Preferred Project Alternative as evaluated in the 1999 Regulatory EIR/S are unchanged except as described below.

Water Quality - The 2003 and 2004 thermal analyses used updated data on river temperatures, existing shade along the river, and the growth rate of riparian forest mitigation previously planted in the Santa Clara Valley. These analyses used a construction schedule with nine years between the time of the first mitigation plantings and the time of the last shade impacts. Flood control work along Ross and Canoas Creeks would not decrease aquatic shade and was not included within the nine-year construction period in this modeling. Temperatures were simulated for the No-Action Alternative, and for the Preferred Project Alternative at time of

likely maximum impact (8 years), shortly after completion of construction (11 years), and completed growth of mitigation plantings (51 years). The discussion below uses the most recent 2004 modeling results.

This modeling determined that water temperatures would decrease in reaches 10 through 12, which currently have the warmest water in the project area, in both the short term (8-11 years) and the long term (51 years). Short-term temperatures would increase in reaches 6 through 9, which are the coolest reaches in the project area, and long-term temperatures would decrease. The net effect relative to the No-Action Alternative, based on a numerical average of the river segments modeled within the project limits, would be a slight cooling overall during the first 11 years after project construction starts and more substantial cooling in the long term. Cooler temperatures would be due to mitigation plantings in some reaches growing in advance of or concurrently with shade losses in other reaches. This includes advance mitigation in reach 12 as described in Section 3.1.

Compared to temperature impacts in Section 4.14 of the Regulatory EIR/S, temporary water temperature increases associated with the nine-year schedule in reaches 6 through 9 would be somewhat larger in most cases. For instance, the largest increase in maximum temperatures for the Preferred Project Alternative in the EIR/S would be 2.2 degrees in June, while with the 9-year construction schedule the largest increase in maximum temperatures in June would be 3.5 degrees. However, simulated short-term temperatures in these reaches would generally be lower than the temperatures previously simulated for the Preferred Project Alternative with a 25-year construction schedule. This is due to lowering of water temperatures for the No-Action Alternative since the previous modeling was done.

Decreases in average maximum temperatures during the spring outmigration of steelhead smolts could benefit this species. Under baseline conditions, daytime maximum temperatures in April can reach into the unsuitable zone for this life stage in reaches 10 and 12. These excessive temperatures would be reduced under the Preferred Project Alternative constructed under the nine-year schedule, probably improving outmigration conditions for this life stage. Average April temperatures in the project area reaches currently are suboptimal for this life stage but would improve in the long term as mitigation plantings increase shade.

The conclusions of the thermal analysis were that simulated temperature increases under the accelerated 9-year schedule would have an insignificant effect overall in the short term, with temperature increases and decreases in individual reaches offsetting each other. The long term impact on water temperatures would be positive for salmonids, with these impacts being similar in overall magnitude to those described in the Regulatory EIR/S, but with larger positive impacts in the upper reaches and nearly neutral impacts in the lower reaches relative to the No-Action Alternative.

The National Marine Fisheries Service (NMFS), the agency responsible for management and protection of salmon and steelhead under the Endangered Species Act (ESA) and the Magnuson-Stevens Fishery Conservation and Management Act, agreed in a letter dated January 7, 2004, that the thermal effects of the 9-year construction schedule would be acceptable for salmonids.

Vegetation - Additional riparian forest vegetation has grown in reach 6, and substantial new vegetation has been allowed to grow in reach 12 under the SCVWD's maintenance program. This vegetation would be retained as advance mitigation, which means that the SCVWD would not be able to resume using seasonal spreader dams in reach 12 as it did for a number of years. Additional mitigation plantings would still be made as required to ensure that total mitigation acreage commitments are kept.

Aquatic Life (Including Fisheries) – The new reach 12 riparian vegetation is located along the bank of the river, is more continuous, and provides more SRA cover than the mitigation plantings previously proposed for reach 12. The net result relative to conditions forecast in the previous environmental documents is increased SRA cover, reduced water temperatures, and improved aquatic habitat connectivity for salmonids, thereby helping to offset construction impacts caused by the loss of existing mature vegetation elsewhere, particularly SRA cover. These are considered to be beneficial but not significant impacts.

Terrestrial Wildlife – The localized increase in vegetation noted above would improve terrestrial habitat connectivity relative to the previous proposal for mitigation plantings in reach 12. This would help to mitigate construction impacts on terrestrial wildlife habitat. This is considered to be a beneficial but not significant impact.

Aesthetics – The change from a 25-year to a 9-year construction schedule would concentrate construction activities into a shorter period, but construction would not be particularly intense along the river as a whole at any given time. The 9-year schedule would have much less visual impact than the 3-year schedule discussed in the Feasibility Study EIR/S. Replacement of gabions with cribwalls in certain areas would not have significant impacts. Long term aesthetic impacts from project construction would be unchanged.

Utilities/Service Systems, Transportation/Traffic, and Noise – The Hillsdale Avenue bridge has already been removed, associated utilities relocated, and the Foxworthy Avenue bridge constructed by the City of San Jose. These actions and their impacts are not part of the Preferred Project Alternative. This change does not result in any significant new or changed impacts for this alternative.

Impacts to transportation, traffic, and noise under a three-year construction schedule were analyzed in the Feasibility Study EIR/S. Annual construction impacts in these categories under a nine-year schedule would be smaller than those discussed in that document. Total construction impacts in these categories would be the same as those discussed in the Regulatory EIS except as noted above in this section.

4.2 Revised Valley View Plan

This alternative would involve less construction work both in terms of volume of materials (excavation, fill, and structures) and in terms of the extent of the area subjected to construction activities. Impacts to habitats would be less than under the Preferred Project Alternative as shown in Tables 5 and 6 below. Other environmental impacts would be the same or less than those under the Preferred Project. Due to the similarity of this alternative to the Preferred Project

Alternative there would be no new significant impacts or significant increases to impacts previously disclosed for the Preferred Project Alternative in the 1999 EIR/S or in section 4.1 above.

4.3 Design Improvement Process and Impacts

As required by the Water Quality Certification Condition 32, SCVWD and the Corps will undertake further studies that may result in design modifications before construction. GWIWG will review study results and any modifications, which will be submitted to the Regional Water Quality Control Board Executive Officer for approval. This approval will assure that any such modifications do not cause any environmental impacts not already addressed.

5.0 EVALUATION OF COMPLIANCE WITH THE CLEAN WATER ACT SECTION 404(B)(1) GUIDELINES

This section evaluates compliance of the Revised Valley View Plan (RVVP) and the Preferred Project Alternative with the Clean Water Act Section 404(b)(1) Guidelines on Specification of Disposal Sites for Dredge/Fill Material (40 CFR Part 230). The alternatives analysis contained in the ROD for the 1999 Regulatory EIR/S evaluates the SCVWD flood control projects' compliance with the Guidelines. That analysis is incorporated here by reference, as amended below. For a Corps civil works study, an equivalent evaluation is performed although a permit is not required.

Tables 5 and 6 show impact numbers for Corps construction of the 1998 Valley View Plan, the RVVP, and the Authorized Project. It should be noted that since the impact and mitigation analyses for the 1998 Valley View Plan were completed, consultation with NMFS, soil borings, and hydraulic studies indicated that the habitat impact numbers and mitigation plan for this alternative would need to be revised. However, since this alternative is no longer implementable, these revisions were not done. Instead, the Valley View Plan was substantially revised as indicated in Section 3.2 and a new mitigation plan was prepared.

Fundamental to the Guidelines is the precept that dredged or fill material should not be discharged into the aquatic ecosystem unless it can be demonstrated that such a discharge will not have an unacceptable adverse impact either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern. No discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge that would have less adverse impact on the aquatic ecosystem. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

During its initial screening the SCVWD developed several alternatives in each of the following categories: Nonstructural Alternatives (floodproofing), Upstream Storage Alternatives, Off-

Stream Storage Alternatives, and Channel Modification Alternatives. The District determined that only the Channel Modification Alternatives were economically feasible and met the project purpose. The Channel Modification Alternatives included combinations of widened channels, bypass channels, and floodwall/levees. After evaluation of these alternatives based on the criteria of environmental impact, cost, and impact on neighboring homes and businesses, two alternatives were selected for further study: the Preferred Project Alternative and the Minimize Vegetation Impacts Alternative.

The RVVP, being similar to the Preferred Project Alternative in its design and differing primarily in reduced scale and length of channel modifications and the omission of reaches 6 and 12, also passes this initial analysis.

Changes in the Preferred Project Alternative since the 1999 FEIR/S do not create significant new impacts or significantly change previously-disclosed impacts, as discussed in Section 4. Therefore, the Section 404(b)(1) analysis in the 1999 FEIR/S is still valid and applicable to this alternative.

Table 5: Comparison of Riparian Forest and SRA Cover Impacts by Alternative

Impact, mitigation, or habitat attribute	Alternative		
	LPP	1998 Valley View Plan	Revised Valley View Plan
Riparian forest loss (acres)	10.46	6.50 ¹	8.04
Riparian forest mitigation required or cost-effective (acres) ²	20.61	12.1 ¹	14.23
Riparian forest mitigation cost-shared (acres)	20.92	12.1 ¹	14.23
Net riparian forest gain after mitigation (acres)	10.46	5.60 ¹	6.21
Loss of overwater vegetation (feet) ³ (SRA cover)	4,731	4,034 ¹	4,601
Net increase in overwater vegetation (feet) after mitigation	8,462	7,350 ¹	9,017
Reduction in total gap length, riparian forest	43%	35% ¹	42%
Reduction in number of gaps in riparian forest	17%	9% ¹	26%

¹Due to new information, it has been determined that these numbers understate impacts and mitigation needs, and the proposed bench mitigation in Reach 7 (3.37 acres) is not implementable due to site conditions.

²Mitigation requirements for the LPP were updated using impact numbers from the 2000 EIS together with the compensation ratio from the HEP.

³This is one measurement of SRA cover, but does not measure all SRA attributes. SRA impacts would be qualitatively worse under the 1998 Valley View plan due to the low bench height.

Table 6: Comparison of Wetland and Aquatic Impacts for Corps Construction (acres)

Plan	Wetlands	Other Waters of the U.S.	All Waters of the U.S.
1998 Valley View Plan	0.28 ¹	2.64 ¹	2.92 ^{1,2}
Revised Valley View Plan	0.43	5.96	6.39 ²
Authorized Project	0.52	7.48	8.00 ²
Reach 6 ³	0.002	0.17	0.172 ²

¹These numbers substantially understate actual impacts and mitigation needs because it has now been determined that additional channel modifications would be needed to convey a 50-year flow.

² All impacts to other waters of the U.S. are temporary

³ These acreages are included for purposes of comparison. All the alternatives shown would require that these impacts occur so the Corps project would function properly.

The second level of analysis is done based on the overall project purpose, provision of protection against the one percent flood (100-year), which has been approved by Congress in their authorization of the LPP. Although the RVVP has less impact on the aquatic environment, the Corps has determined that the RVVP is not a practicable alternative because it does not meet the overall project purpose, one percent flood protection. The Preferred Project Alternative remains as the least environmentally damaging practicable alternative as determined in the Section 404(b)(1) analysis in section III B.2 (b) of the ROD for the 1999 Regulatory EIR/S.

6.0 CUMULATIVE IMPACTS

6.1 Preferred Project Alternative

As part on the section 401 water quality certification, the SCVWD agreed to modify the project design to include where feasible excavated east bank floodplain bench features, east and west bank biotechnical improvements, and grade control structures. The modifications would be designed to improve current ecological conditions in the Guadalupe River and would not result in new significant impacts or an increase in significant impacts described in the Final EIR/EIS.

The future design improvement studies will examine whether inclusion of localized small floodplain benches, additional biotechnical structures, or other bank modifications in reaches 6 through 8 of the existing channel would be feasible and desirable. If implemented, such project modifications generally would be located to minimize impacts on habitats of concern such as riparian forest. These future studies would also examine the feasibility and desirability of replacing the short bypasses planned for reaches 9 and 11A with floodplains.

6.2 Other Projects in the Vicinity of the Study Area

The 1999 Regulatory FEIR/S describes a number of other projects in the vicinity and addresses the cumulative impacts of the proposed action in relation to the impacts of these other projects. Additional projects in the general vicinity of the proposed action are described below.

Guadalupe Creek Mitigation Project: The Guadalupe Creek Restoration Project site is located at the downstream end of Guadalupe Creek. It is bordered upstream by Masson Dam, downstream by the Almaden Expressway, to the north by residential development and the Los Capitancillos percolation pond system, and to the south by Coleman Road. This project consisted of the establishment of approximately 12,044 linear feet of SRA cover vegetation to improve aquatic habitat at this site. This will offset environmental effects associated with future SCVWD projects. The Guadalupe Creek Restoration Project was completed in 2001.

Lenihan Dam Outlet Modifications Project: Since the late 1980's, sections of the Lenihan Dam outlet pipeline (at Lexington Reservoir) have experienced buckling. Due to these conditions, the Divisions of Safety of Dams (DSOD) has imposed an operational restriction limiting discharges through the outlet pipe to 70 cubic feet per second (cfs), thereby reducing operational flexibility.

This project is intended to provide a fully functional outlet works through the construction of the following elements: 1) a tunnel through the hillside to the south of Lenihan Dam to carry a new outlet pipe; 2) a multi-port inclined intake structure in Lexington Reservoir adjacent to the dam; 3) an energy dissipation structure in Los Gatos Creek at the new pipeline discharge; and 5) new control buildings for operation of the control valve located near the adjacent Santa Clara County Department of Parks and Recreation parking lot and the proposed outlet energy dissipation structure. The construction period would be about 18 months, using several staging areas including an existing paved lot that provides parking for public recreational uses. Reservoir levels will be lowered for one year and a coffer dam will be installed to allow for construction of the new intake structure.

Almaden-Calero Dam Seepage Mitigation Geotechnical Investigations: This project is the initial step to address seepage problems at Almaden and Calero Dams, at the request of the DSOD (Division of Safety of Dams). The project entails geotechnical exploration through trenching and borings to gather data at the downstream toe of Almaden Dam and Calero Dam.

Guadalupe River Trail Reach 6 (Willow Street to I-280): The project will involve the construction of 1.15 miles of pedestrian and bicycle trail. This segment of the multi-use Guadalupe River recreation/transportation trail will link the Valley Transit Authority's Tamien/Caltrain station at Willow Street to the downtown Guadalupe River Trail under I-280 at Woz Way.

The trail will be constructed in the following two phases: Phase 1 will be a permanent trail between I-280 at Woz Way to Virginia Street along the river's west bank. This trail will have an at-grade crossing at Virginia Street and an interim trail continuing to Harliss Avenue and Willow Street east of the river; this will connect to the existing Highway 87 bikeway leading to the connection to the VTA Tamien Station and Caltran Station.

Phase 2 includes a permanent trail undercrossing at Virginia Street leading to the top of the west bank continuing south up to the rail road tracks and crossing over the River with a pedestrian and bicycle bridge and landing on McLellan Avenue on the east side continuing to Willow Street where a trail staging area holds parking for 6 - 10 cars and a bridge ramp structure leading to a pedestrian and bicycle bridge over Willow Street that connects to the Hwy 87 Bikeway Trail. This phase will not commence until the future SCVWD Upper Guadalupe Flood Control and the Peninsula Corridor Joint Powers Board/Union Pacific railroad widening projects in this reach are complete. Trail amenities included in both phases will include a trail/rest overlook, public art areas, gateways, corridor landscaping and interpretive wayfinding and educational signage.

Guadalupe Creek Trail Master Plan: The City of San Jose proposes to adopt and implement a Master Plan for the approximately 3.9 mile long multi-use recreational trail between the

Guadalupe River Trail and Almaden Quicksilver County Park. The trail would be constructed in the following three phases: 1. An interim trail between west side of Almaden Expressway and Singletree (Segments 2-5), and associated improvements. 2. Final trail improvements between east side of Almaden Expressway and the Camden Avenue/Coleman Road intersection (Segments 1-6). This segment includes the bridge over Almaden Expressway and two other bridges over the creek. This phase also includes purchase of land for the construction of two paved parking lots. 3. Trail improvements between the Camden Avenue/Coleman Road intersection and Almaden Quicksilver County Park. (Segments 7-8). The improvements in this third phase would not commence until the Guadalupe Rubbish Disposal Company, Inc. landfill is closed which is projected to be after the year 2030. At that time it will be determined if additional environmental review is needed

Guadalupe River Trail Bridge at Almaden Lake Park: The Project includes the installation of a prefabricated pedestrian/bicycle bridge and associated trail. The completion of a 210-foot long bridge crossing over Los Alamitos Creek at the outfall of Almaden Lake and 565 lineal feet of associated paved pedestrian/bicycle trail.

Guadalupe River Trail Reach 12, Phase I Trail Project: This project involves construction of a pedestrian and bicycle trail along part of reach 12 of the Guadalupe River, from Blossom Hill Road downstream to the vicinity of State Route 85, then extending east to Chynoweth Avenue.

6.3 Cumulative Impacts Assessment

Cumulative impacts on geology, soils, seismicity, hydrology, biological resources, hazardous materials, land use, socioeconomics, cultural resources, air quality, noise, public services, utilities, public safety, and traffic would not change from those disclosed in the 1999 Regulatory FEIR/S. In addition, the impacts of the Revised Valley View Plan would be less than or substantially similar to those of the Preferred Project Alternative. Therefore, cumulative impacts for this plan would be less than or substantially similar to those for the Preferred Project Alternative.

7.0 ENVIRONMENTAL COMPLIANCE

Since completion of the 1999 FEIR/S, a number of environmental compliance actions have been taken. These are summarized below in Table 7. The major actions are described in more detail in sections 3.1 and 3.3 above.

8.0 CONCLUSION

The Preferred Project Alternative has been revised slightly and its proposed construction schedule has been accelerated since issuance of the 1999 regulatory final EIR/S. These changes will not have a significant effect on the human environment. Environmental compliance efforts for this project have resulted in additional regulatory requirements including studies that could result in design modifications. A new evaluation under Section 404(b)(1) of the Clean Water

Act (CWA) has determined that this alternative is still the *least environmentally-damaging practicable alternative* under this section of the CWA.

The Corps' Valley View Plan has been substantially revised since issuance of the 1998 feasibility study final EIR/S. These revisions make this alternative similar to the Preferred Project Alternative for reaches 7 through 11 but with somewhat smaller impacts. This alternative will not be constructed but is included for purposes of comparison and will be the basis for cost-sharing of project construction.

Table 7: Environmental Compliance

Statute	Status
National Environmental Policy Act	Record of Decision for the feasibility study EIS signed June 1, 1999; ROD for regulatory EIS signed Jan. 20, 2004. Environmental Assessment and draft Finding of No Significant Impact prepared to incorporate regulatory EIS into NEPA compliance for the Corps project and to update the alternatives and impacts.
Endangered Species Act	Formal Section 7 consultation completed in 2000. District council has determined the Biological Opinion applies to Corps construction of Authorized Project. NOAA Fisheries has provided written endorsement of construction in nine years. Informal concurrence that the 9-year construction schedule is consistent with the BO has been obtained from NMFS, and reopened formal consultation is in progress.
Clean Water Act	Section 401 certification obtained December 2003. Section 404(b)(1) equivalency for the Authorized Project in 1999 FEIR/S. Section 404(b)(1) equivalency supplement for Revised Valley View Plan and Preferred Project in Section 4.0 of this document.
Clean Air Act	Based on the analysis in the EIS the LPP would conform to the most recent State Implementation Plan. The RVVP would have smaller impacts.
National Historic Preservation Act	Feasibility-level cultural resources coordination completed. Revised Valley View Plan footprint is entirely within footprint of FEIR/S alternatives. Treatment plan and Memorandum of Agreement with the State Historic Preservation Officer will be prepared prior to construction.
Fish and Wildlife Coordination Act	Final Coordination Act Report (CAR) submitted August 1998 and provides adequate information for assessment of mitigation needs for Revised Valley View Plan and updated Authorized Project. Planning Aid Report in progress to supplement CAR.
CEQA	FEIR (SCH#1997022059) certified and Preferred Project approved by SCVWD Board August 15, 2001.

DRAFT FINDING OF NO SIGNIFICANT IMPACT (FONSI)
under the
NATIONAL ENVIRONMENTAL POLICY ACT
U.S. Army Corps of Engineers
San Francisco District
December 2004

1. Proposed Action. The proposed action is several modifications to the Upper Guadalupe River flood control project, Santa Clara County, California. These modifications are described in the Environmental Assessment dated November 2004.
2. Reference. Incorporated herein by reference is the Environmental Assessment and Initial Study for the Upper Guadalupe River flood control project, Santa Clara County, California, dated December 2004.
3. Factors Considered. Factors considered in the FONSI are impacts on water quality, air quality, noise, transportation and utilities, vegetation, fish and wildlife, threatened and endangered species, cultural resources, recreation, aesthetics, and socioeconomic conditions.
4. Conclusions. Based on the information obtained during the preparation of the Environmental Assessment on this proposal, it is concluded that the proposed action would not have a significant impact on the quality of the human environment. The preparation of an Environmental Impact Statement is therefore not required.

Date

Philip T. Feir
Lieutenant Colonel, Corps of
Engineers
District Engineer